REMARKS

Reconsideration of this application is respectfully requested. The indication of allowability of claim 13 is appreciated. This claim has been rewritten into independent form and should be in clear condition for allowance.

The rejection under section 112, first paragraph, is traversed as the original application does include a written description of the method claims recited in claims 8 to 13. The Action states no basis for the rejection and, should be withdrawn as being unsupported. Further, the rejection should be withdrawn because the application discloses the method for connecting armature windings at page 11 that is recited in claims 8 to 13. The following comparison of the disclosure from the original application and the pending method claims demonstrates the support in the application for the claims:

CLAIMS	ORIGINAL APPLICATION
A method for connecting armature windings in an electrical machine, wherein the armature windings include a plurality of phase windings, said method comprising the steps of:	By properly connecting the winding turns of the armature, substantially any desired output voltage level can be obtained from the generator within a certain range of available voltages. The ability to select any output voltage level by establishing connections of armature winding turns provides an economical technique for customizing utility and industrial generators for specific voltage level requirements. Spec. p. 6, 2nd para.
a. segmenting each of the plurality of phase windings into a first winding segment and a second winding segment by establishing a connection point at one of a plurality of available connection points on	as shown in Figure 7, each phase winding may be partitioned into two (or more) groups of winding segments, such as winding segment groups A1 and A2 of phase A54; groups B1 and B2 of phase B62 and groups C1 and C2 of phase C64.

said phase winding;	Spec. p. 11, 2nd full para.
b. at the established connection point, connecting an end of the first winding segment in each phase winding to an end of the first winding segment in another of said phase windings to form a Delta winding topology, and	Connecting the high voltage winding segment portions (A1, B1 and C1) together a mini-Delta topology 60 is formed within the armature winding. Spec. p. 11, 2nd full para.
c. at the established connection point, connecting a first end of one of said second winding segments to a plurality of connected ends of said each of said first winding segments to form a Wye topology about each connection point.	The low voltage portions of winding segments (A2, B2 and C2) are each attached at one end 52 to a terminal tap 50 which is also a node of the Delta configuration, to form a Wye configuration 66 centered on each node 50. Spec. p. 11, 2nd full para.
9. A method as in claim 8 wherein the available connection points are at end turns of the phase winding, and the established connection point is a contact tap at a selected end turn of the phase winding.	The end turns 36 provide a ready-made point at which electrical connection may be made to tap into a phase winding circuit. The end turns are easily accessible as they extend outside of the stator body 14, and allow connections 50 to be made to the windings with relative ease. The phase windings 20 have two end terminals 52 at opposite ends of the winding, terminal taps 50 may be connected to selected winding end turns to extract electric power from only a portion of the winding. A terminal tap 50 may provide a connection to any one or more of the end turns 36 in a phase winding 20. Spec. p. 12, 1st full para.
10. A method as in claim 8 wherein the first and second winding segments are in-phase.	By tapping the phase winding 20 at a selected end turn(s) 50, the phase winding is partitioned into two or more winding segments. For example, a winding segment for phase A54 of a three phase generator (having phases A, B62 and C64) may divided into winding segments A1 56 and portion A2 58. A terminal tap 50 at a selected end turn partitions the phase A winding 54 into the A1 portion 56 of the winding segments, and A2 portion 58. The A1 winding portion 56 may be high-voltage portion of the phase A winding, extending between the terminal tap 50 and an end terminal 52 of the phase A winding. Similarly, the A2 winding portion 58 may

	be the low-voltage portion 58 of the phase A winding 54 between the terminal tap 50 and the other end terminal 52. The terminal tap 50 that partitions one phase winding, e.g., phase A, is connected to the end 52 of another phase winding circuit, e.g., phase B. Spec. pp 12-23, bridging para.
11. A method as in claim 8 wherein an opposite end of said second winding segment is connected to an external terminal of said windings.	The other segments (A2, B2, C2) of each winding phase are connected between a respective terminal tap 50 and an output terminal 26 of the armature. The terminal tap 50 thus becomes a center node of a mini-Wye topology 66 formed by segments A1, A2 and C1, for example. p. 13, 1st para.
12. A method as in claim 8 where said plurality of phase windings include three phase windings, and each of said three phase windings has an established connection point, and further comprising forming an external connection at an opposite end of each of the second winding segments to establish a three-phase power connection to the phase windings.	The armature winding phases (A, B and C, for example) of the generator are connected together to provide a power output to the generator. Conventionally, the ends of the winding phases are connected end to end (across end terminals) in either the Delta or Wye topologies or a combination of the two topologies. However, as shown in Figure 7, each phase winding may be partitioned into two (or more) groups of winding segments, such as winding segment groups A1 and A2 of phase A54; groups B1 and B2 of phase B62 and groups C1 and C2 of phase C64. Connecting the high voltage winding segment portions (A1, B1 and C1) together a mini-Delta topology 60 is formed within the armature winding. The low voltage portions of winding segments (A2, B2 and C2) are each attached at one end 52 to a terminal tap 50 which is also a node of the Delta configuration, to form a Wye configuration 66 centered on each node 50. The opposite end of each of these winding portions serves as the output terminals 26 of the armature windings for the entire generator. Spec. pp. 11-12, bridging para.

13. A method as in claim 8 further comprising the step of establishing a line-to-line output level (V_{LL}) between each of said phase windings in accordance with the following expression: $V_{LL} = \lvert Xe^{j\pi/6} + \sqrt{3}\ (1 - X)\ \rvert$ where: "V_{LL}" is the line-to-line voltage as a proportion of a phase winding voltage level; "X" is a fraction of a phase winding arranged in a Delta topology, and "j" is a complex operator, wherein $j^2 = -1$.	An equation (1) has been developed that correlates the line-to-line voltage of a generator to the proportion of the armature phase windings that are arranged in a Delta topology, where the rest of the windings are in a Wye topology. The equation is as follows: (1) $V_{LL} = \lvert Xe^{j\pi/6} + \sqrt{3}\ (1 - X)\ \rvert$ where: "V_{LL}" is the line-to-line voltage as a proportion of the phase winding voltage level; "X" is the fraction of a phase winding in a Delta topology, and "j" is the complex operator, wherein $j^2 = -1$. Spec. pp. 14, last para.

The above quotations from the original specification are exemplary and do not constitute the entirety of the support for the pending method claims. These quotations are merely provided to demonstrate that there is an adequate written description of the pending method claims.

The rejection of claims 8 to 12 as being anticipated by Nakamura et al is traversed because Nakamura does not disclose "segmenting each of the plurality of phase windings into a first winding segment and a second winding segment by establishing a connection point **at one of a plurality of available <u>mid-winding</u> connection points on said phase winding**" (emphasis supplied). The term "mid-winding" has been added to the claims to emphasize that the plurality of connection points are within the winding and not at the ends of the winding. Moreover, dependent claim 11 recites an "external terminal" that is distinct from the "mid-winding" connection points. At best, Nakamura et al at figure 10A discloses an armature winding topology having a single mid-winding connection

point (U2, V2 and W2) for each of the three winding phases. There is no disclosure of a plurality of mid-winding connection points, as is called for in method claim 8. Accordingly, there is no anticipation and the rejection should be withdrawn.

Further the anticipation rejection should be withdrawn for the additional basis that Nakamura et al does not disclose: mid-winding connection points for a phase winding on different end turns, as is recited in claim 9, and does not disclose three phase windings each with a plurality of mid-winding connection points. Accordingly, the anticipation rejection should be withdrawn.

This application is in good condition for allowance. If any small matters remain, the Examiner is requested to telephone the undersigned to allow for quick resolution of such issues. Prompt reconsideration and allowance of this application is requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made**."

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE IN THE CLAIMS

The following is a marked-up version of the amended claims.

8. (Amended) A method for connecting armature windings in an electrical machine, wherein the armature windings include a plurality of phase windings, said method comprising [the steps of]:

a. segmenting each of the plurality of phase windings into a first winding segment and a second winding segment by establishing a connection point at one of a plurality of available mid-winding connection points on said phase winding;

b. at the established mid-winding connection point, connecting an end of the first winding segment in each phase winding to an end of the first winding segment in another of said phase windings to form a Delta winding topology, and

c. at the established mid-winding connection point, connecting a first end of one of said second winding segments to a plurality of connected ends of said each of said first winding segments to form a Wye topology about each mid-winding connection point.

9. (Amended) A method as in claim 8 wherein the available mid-winding connection points are at different end turns of the phase winding, and the established connection point is a contact tap at a selected end turn of the phase winding.

12. (Amended) A method as in claim 8 where said plurality of phase windings include three phase windings, and each of said three phase windings has [an] a plurality

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of established mid-winding connection [point] points, and further comprising forming an external connection at an opposite end of each of the second winding segments to establish a three-phase power connection to the phase windings.

13. (Amended) A method [as in claim 8 further comprising the step of] for connecting armature windings in an electrical machine, wherein the armature windings include a plurality of phase windings, said method comprising:

a. segmenting each of the plurality of phase windings into a first winding segment and a second winding segment by establishing a connection point at one of a plurality of available connection points on said phase winding;

b. at the established connection point, connecting an end of the first winding segment in each phase winding to an end of the first winding segment in another of said phase windings to form a Delta winding topology;

c. at the established connection point, connecting a first end of one of said second winding segments to a plurality of connected ends of said each of said first winding segments to form a Wye topology about each connection point, and

d. establishing a line-to-line output level (V_{LL}) between each of said phase windings in accordance with the following expression:

$$V_{LL} = \left| Xe^{j\pi/6} + \sqrt{3}\,(1 - X) \right|$$

where: "V_{LL}" is the line-to-line voltage as a proportion of a phase winding voltage level;

"X" is a fraction of a phase winding arranged in a Delta topology, and

"j" is a complex operator, wherein $j^2 = -1$